

5.7 Short-term Use Versus Long-term Productivity of the Environment

This section compares *the* potential short-term effects of *the alternatives analyzed in this EIS* on the *use of the environment with the potential effects on its* long-term productivity. Appendix C.8 contains a discussion of the relationship between short-term uses of the environment and long-term productivity at Hanford under the Minimum INEEL Processing Alternative.

5.7.1 NO ACTION ALTERNATIVE

Short-term use of the existing environment would not change from that described in Chapter 4 of this EIS. Long-term productivity could be impaired through the risk associated with the indefinite storage of mixed transuranic waste/SBW and calcine in the tank farm and bin sets at INTEC. The radioactivity in the mixed transuranic waste/SBW and calcine would decay over thousands of years but the potential for release to the aquifer and surrounding environment would increase as the tank farm and bin sets aged and the level of uncertainty of maintaining institutional controls increased.

5.7.2 CONTINUED CURRENT OPERATIONS ALTERNATIVE

As with the No Action Alternative, short term use of the environment would not change from that described in Chapter 4 of this EIS. There would be some small short-term worker risk and small short term impairment of air quality associated with calcining the remaining mixed transuranic waste/SBW but this would contribute to reducing long term risk and preserving the long term productivity of the environment. The long-long term productivity of the environment could be impaired through the presence and risk associated with the indefinite storage of calcine but the risk associated with the indefinite storage of mixed transuranic waste/SBW would not exist. Thus, the risk to

the long term productivity of the aquifer would be less than the No Action Alternative. Radioactivity in the calcine would decay over thousands of years but the potential for release to the surrounding environment would increase as the bin sets aged and the level of uncertainty of maintaining institutional controls increased.

5.7.3 ACTION ALTERNATIVES

In the context of their affects on short-term use versus long-term productivity of the environment the action alternatives are indistinguishable. Each of the action alternatives involves a period of treating mixed transuranic waste/SBW and treating or containerizing calcine during which there would be a small temporary increase in worker risk and impairment to air quality. The short-term use of the environment would not change from that described in Chapter 4 of this EIS. Each of the action alternatives would place the mixed transuranic waste/SBW and calcine in a form suitable for disposal and place the treated waste forms in a disposal facility or repository designed to preserve the long term productivity of the environment and reduce dependence on the effectiveness of institutional controls.

5.8 Irreversible and Irretrievable Commitments of Resources

The irreversible or irretrievable commitment of resources is the permanent loss of a resource for future uses or alternative purposes. These kinds of commitments occur as a result of destruction or use of a resource (e.g., fossil fuels) that cannot be replaced or recovered. Irreversible and irretrievable commitments of resources could potentially include land, groundwater, construction materials, and energy resources. Some resources and materials that would be used under each alternative could be recycled and do not represent an irreversible or